

REMARKS

Claims 1-15 stand rejected under 35 U.S.C. § 112, second paragraph. It is respectfully submitted that the enclosed amendment obviates the alleged indefiniteness. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 1-5 stand rejected under 35 U.S.C. § 102 as being anticipated by Applicants' admitted prior art ("AAPA"), and claims 1-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Ke et al. '093 ("Ke"). These rejections are respectfully traversed for the following reasons.

With regard to AAPA, the Examiner alleges that "it is inherent that the size of given shield ring (focus ring) fits the relationship between the size and opening ratio for a particular embodiment." The Examiner's position is not understood. It appears that the Examiner based this allegation simply on the notion that there is a wide range of opening ratios. However, AAPA does not disclose a particular embodiment which satisfies the claimed feature of the present invention. Simply because AAPA *can* do so is completely irrelevant to inherency. As is well known in patent prosecution, "inherency may not be established by probabilities or possibilities;" Scaltech Inc. v. Retec/Tetra, 178 F.3d 1378 (Fed. Cir. 1999). In the instant case, the Examiner concludes inherency, at best, based on the possibility that AAPA *could* satisfy the claimed feature.

Moreover, it is respectfully submitted that AAPA does not even disclose phenomenon such as pattern shape changes and critical dimensional shift occurrences may be caused depending on a change in the opening area ratio on a wafer, and that the ratio between an etchant scavenged with the focus ring and deposition species alters as a result of the change in the

opening area ratio, thereby causing the above phenomenon. Moreover, AAPA also fails to disclose determining the surface area of the shield device in accordance with the opening area ratio. Accordingly, without knowledge of such parameters as disclosed only in Applicants' specification, AAPA in fact would probably NOT include the claimed feature because it is completely silent as to the needed parameter to obtain the claimed feature, let alone inherently disclose such a feature which would require AAPA to *necessarily* include the feature.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that APA does not anticipate claims 1-5.

Regarding Ke, according to col. 8, lines 51-57 thereof relied on by the Examiner, the concentration of fluorine ions which are scavenged decreases and the selectivity of the etch process improves, if the surface area of the protective shield is increased. However, similar to AAPA, Ke does not disclose that phenomenon such as pattern shape changes and critical dimensional shift occurrences may be caused depending on a change in the opening area ratio on a wafer, and that the ratio between an etchant scavenged with the focus ring and deposition species alters as a result of the change in the opening area ratio, thereby causing the above phenomenon. Without this knowledge, provided solely by Applicants' specification, one of ordinary skill in the art would find it difficult to find out the linkage between the opening area ratio on the wafer and the surface area of the shield device. Accordingly, absent Applicants' specification, Ke does not suggest nor enable the aforementioned claimed features.

It is respectfully submitted that the Examiner's allegation of obviousness is *per se* improper because the Examiner has not provided any prior art which discloses the claimed feature as required under § 103. The Examiner merely discounts the claimed features admittedly not disclosed in any of the applied references as allegedly being obvious without support whatsoever from any of the cited prior art. The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard for establishing obviousness under § 103:

To establish *prima facie* obviousness of a claimed invention, ***all*** the claim limitations must be taught or suggested ***by the prior art***. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claims 1-15 because the cited prior art fails the "all the claim limitations" standard required under § 103.

The Examiner has failed to identify any portions of the cited prior art which allegedly suggest the claimed features. What the ***Examiner*** believes to be obvious is irrelevant in determining patentability under § 103. In this regard, it is respectfully submitted that the Examiner has merely concluded that the claimed invention would have been obvious based on the Examiner's own ***opinion***, which is not commensurate with the requirements under § 103. Accordingly, absent any prior art teachings of the specific features recited in the claims, the pending rejection is necessarily based solely on improper hindsight reasoning using only Applicants' specification as a guide to reconstruct the claimed invention. The "Examiner's opinion" can not be relied on to replace the deficiency of a prior art reference.

If the Examiner intended to take Official Notice that the differences between the present invention and cited prior art and/or the motivation to modify Ke are well-known in the art, then

pursuant to MPEP § 2144.03, Applicants respectfully traverse such an assertion and **request the Examiner to cite a reference in support of his position** (*see* second paragraph, last three lines of MPEP § 2144.03, which requires the Examiner to cite a reference in support of his allegation of Official Notice when Applicants traverse). Indeed, only Applicants' specification discloses the claimed features and the motivation for providing it within the particular combination recited in the claims.

At best, the Examiner's basis for the rejection amounts to nothing more than a general allegation that one of ordinary skill in the art *can* achieve the claimed invention, which is not a proper standard by which to make a rejection under § 103. The Examiner is directed to MPEP § 2143.03 under the subsection entitled "Fact that References Can Be Combined or Modified is Not Sufficient to Establish *Prima Facie* Obviousness", which sets forth the proper standard:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (*In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990)).

In the instant case, even assuming *arguendo* that the cited prior art can be modified to reach the claimed invention, it is submitted that the "mere fact that [the cited prior art] can be modified ... does not render the resultant modification obvious" because nowhere does the *prior art* "suggest the desirability of the modification" as set forth by the Examiner.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are

also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102/103 be withdrawn.


CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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